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RESEARCH IN HOME ECONOMICS

at the

LAND-GRANT INSTITUTIONS

1934-1935

Compiled by

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EXPLANATORY NOTE.

This compilation of information on the present status of research in Home Economics at Land-Grant Institutions includes lists of I Active Projects as of November 1934 and II Published Reports from November 1, 1933, to November 1, 1934. Although these lists are limited for the most part to research conducted in home economics departments, divisions, or colleges, there are included a few projects and reports closely related to home economics from other departments, particularly in institutions where there is no research in the home economics departments.

The information under I, Active Projects, includes the project title, date of approval by the Office of Experiment Stations, U.S.D.A., if the project is supported in part or as a whole by Purnell or Adams funds, names of project leaders and research workers, and sources of financial support. The terms, Purnell, Hatch, and Adams refer to Federal funds provided for research at the agricultural experiment stations under these Congressional Acts. Brackets are used to indicate the departments other than Home Economics either cooperating in the research (in which case only the name of the cooperating department is bracketed) or entirely responsible for the research (in which case the project title and leaders are also included within the brackets).

Under II, Published Reports, precedence is given to publications of the agricultural experiment stations. Many of these publications are available on request from the station in question. References to journal articles are given in the form used in the Experiment Station Record, which contains abstracts of most of the publications listed.

ALABAMA

I.

[Studies of the vitamin B complex, 6/16/27, W. D. Salmon and G. A. Schrader, Animal Husbandry], (Purnell).

[Pathological conditions associated with a lack of the vitamin B complex, 6/16/27, W. D. Salmon and C. O. Prickett, Animal Husbandry] (Adams and Purnell).

II.

Progress reports in Alabama Sta. Rpt. 1932, pp. 19, 20; 24, 25.

Magneto-optic nicol rotation method for quantitative analysis of calcium, E. R. Bishop, C. B. Dollins, and I. G. Otto. Jour. Amer. Chem. Soc., 55 (1933), pp. 4365-4370.

Manganese isotopes, I. G. Otto and E. R. Bishop. Jour. Amer. Chem. Soc., 55 (1933), pp. 4370, 4371.

Isotopes of sodium and cesium, C. B. Dollins and E. R. Bishop. Jour. Amer. Chem. Soc., 55 (1933), pp. 4372-4374.

The magneto-optic nicol rotation method for the quantitative analysis of copper, E. R. Bishop, I. G. Otto, and L. Baisden. Jour. Amer. Chem. Soc., 56 (1934), p. 408.

The calcium and phosphorus content of some Alabama vegetables, E. R. Bishop. Jour. Nutrition, 8 (1934), pp. 239-245.

The effect of a deficiency of vitamin B. upon the central and peripheral nervous systems of the rat, C. O. Prickett. Amer. Jour. Physiol., 107 (1934), pp. 459-470.

Studies of the raw egg white syndrome in rats. W. D. Salmon and J. G. Goodman. Jour. Nutrition, 8 (1934), pp. 1-24.

ARIZONA

I.

The relation of nutrition to "mottled enamel" endemic in certain Arizona communities, 7/10/31, M. C. Smith, E. M. Lantz, and E. Caldwell (Purnell).

The biological value of the hegari proteins and the supplemental value of certain protein concentrates, 7/10/31, M. C. Smith (Purnell).

II.

Progress report in Arizona Sta. Rpt. 1932-33, pp. 58-63.

The histologic changes in the enamel and dentin of the rat incisor in acute and chronic experimental fluorosis, I. Schour and M. C. Smith. Arizona Sta. Tech. Bul. 52 (1934), pp. 91.

Comparative toxicity of fluorine compounds, M. C. Smith and R. M. Leverton. Indus. and Engin. Chem., 26 (1934), pp. 791-797.

The effect of fluorine on calcium and phosphorus metabolism in albino rats, E. M. Lantz and M. C. Smith. Amer. Jour. Physiol., 109 (1934), pp. 645-654.

The effect of fluorine upon the rate of eruption of the rat incisor and its correlation with bone development and body growth, M. C. Smith. Jour. Dental Res., 14 (1934), pp. 139-144.

ARKANSAS

I.

A study of the factors which affect the quality of canned tomatoes, 5/1/34, M. Smith and Z. Battey (Purnell).

The causes and prevention of spoilage of home-canned vegetables in Arkansas, 5/1/34, M. Smith and W. L. Bleeker [Bacteriology] (Purnell).

An analysis of a few of the staple cotton materials used extensively for children's clothing, 5/1/34, O. Smenner (Purnell).

II

Progress report in Arkansas Sta. Bul. 297 (1933), pp. 103-114.

A micro method for the determination of fatty acids from small amounts of whole blood, M. E. Smith and M. C. Kik. Jour. Biol. Chem., 103 (1933), pp. 391-398.

The influence of fasting on the concentration of blood lipids in the albino rat, B. Sure, M. C. Kik, and A. E. Church. Jour. Biol. Chem., 103 (1933), pp. 417-424.

Hyperthyroidism and nutrition. I, Vitamin B and thyroxin, B. Sure and M. E. Smith. Jour. Nutrition, 7 (1934), pp. 547-555.

The effect of vitamin A deficiency upon the concentration of blood lipids and upon the oestrous cycle of albino rats, M. Smith. Abstracted in Jour. Home Econ., 26 (1934), p. 521.

CALIFORNIA

I.

The effect of avitaminoses on the N metabolism of the rat, A. F. Morgan and E. F. Brown (Departmental).

The vitamin B content of bread as affected by baking conditions, A. F. Morgan, H. Frederick, and R. Popper (Fleischmann Yeast Fellowship).

Carotene absorption and vitamin A storage in rats, A. F. Morgan and R. Popper (Departmental).

The vitamins B and G in fresh, dried, and canned apricots and peaches, A. F. Morgan and H. Davison (Departmental).

Relation of vitamins B and G to lactation in rats, A. F. Morgan, C. M. C. Simson, and K. S. Bishop (Departmental).

The temperature coefficient of heat damage to the nutritive value of casein, A. F. Morgan and M. Loveen (Departmental).

The effect of high carbohydrate and high fat diets upon blood phosphorus partition, A. F. Morgan and N. Van Cleve (Departmental).

The vitamin A and D content of Pacific coast fish oils as affected by methods of extraction, A. F. Morgan and L. Kimmel (National Oil Products Co. Fellowship).

Effect of adequacy of diet on cholesterol deposition in tissues of rats, especially the liver, (a) during underfeeding and A avitaminosis, R. Okey and H. L. Gillum; (b) during B and G avitaminoses, R. Okey; (c) when lecithin is also fed, that is, in egg yolk, R. Okey and E. Yokela (Departmental).

Study of new method of making oil-water emulsions with reference to homogeneity and stability, I. S. Hall and E. Halstrom (Departmental).

Determination of particle size and distribution in concentrated emulsions, I. S. Hall (Departmental).

Determination of hydrofluorides of certain organic nitrogen compounds, I. S. Hall (Departmental).

CALIFORNIA

II.

Nutritive value of raw and heated casein with and without added amino acids, A. F. Morgan and E. O. Greaves. Proc. Soc. Expt. Biol. and Med., 31 (1934), pp. 506, 507.

The digestibility of crust and crumb of white bread in vitro, E. O. Greaves and A. F. Morgan. Cereal Chem., 11 (1934), pp. 228-230.

The effect of heat upon the biological value of meat protein, A. F. Morgan and G. E. Kern. Jour. Nutrition, 7 (1934), pp. 367-379.

The relation of reducing value and extent of browning to the vitamin C content of orange juice exposed to air, M. A. Joslyn, G. L. Marsh, and A. F. Morgan. Jour. Biol. Chem., 105 (1934), pp. 17-28.

The sequence and extent of tissue changes produced by viosterol and parathyroid extract, A. F. Morgan and Z. Samisch. Jour. Biol. Chem., 105 (1934), p. lxiv.

The effects of moderate doses of viosterol and of parathyroid extract upon rats, A. F. Morgan, L. Kimmel, R. Thomas, and Z. Samisch. Jour. Biol. Chem., 106 (1934), pp. 531-544.

The effect of acid neutral and basic diets on the calcium and phosphorus metabolism of dogs, A. F. Morgan, E. A. Garrison, H. Householder, A. M. Hansen, M. V. Seberger, J. T. Watenpaugh, A. Felsher, and M. L. Long. Univ. Calif. Pub. in Physiol., 8 (1934), pp. 61-106.

Nutritive value of foods purchased by dependent families, R. Okey and M. G. Luck. Heller Com. Res. Social Econ., Pub. Univ. Calif., July 1934, mimeographed, pp. 15.

A shortened method for calculating the adequacy of family food purchases, R. Okey and M. G. Luck. Jour. Amer. Dietet. Assoc., 10 (1934), pp. 12-19.

Effect of diet on the lipid content of tissues of the rat, R. Okey, H. L. Gillum, and E. Yokela. Jour. Biol. Chem., 107 (1934), pp. 207-212.

COLORADO

I.

The baking of flour mixtures at high altitudes. II, Physicochemical factors, Revised 8/15/32, I. L. Allison and M. A. Barmore. (Purnell) (State).

A study of factors affecting the culinary quality of potatoes, 11/5/34, I. M. K. Allison, M. A. Barmore, and L. Butler. (Purnell).

II.

Progress report in Colorado Sta. Rpt. 1933, pp. 15, 16.

The influence of chemical and physical factors on egg-white foam, M. A. Barmore. Colorado Sta. Tech. Bul. 9 (1934), pp. 58.

CONNECTICUT (Storrs)

I.

Factors that determine standards of living in farm homes--(a) Factors and conditions affecting the amount and use of family income in the Eastern Highland, 6/24/27; (b) An economic analysis of the food consumed by a selected group of families in the Eastern Highland, 6/24/30; (c) The cost and adequacy of the food consumed by farm families in Connecticut in 1929 compared with 1932, 8/22/32, E. V. W. Clapp (Purnell).

FLORIDA

I.

The relation of growth to phosphorus, calcium, and lipin metabolism as influenced by the thymus, 5/6/29, C. F. Ahmann (Purnell) (State).

A study of lecithin synthesis in hens on a vitamin A and lipoid-free diet, 7/23/32, O. D. Abbott (Purnell) (State).

A study of the changes which occur in the hematopoietic tissues of rats on a vitamin A-free diet, 7/23/32, O. D. Abbott (Purnell) (State).

A study of the chemical composition of the ash of Florida fruits and vegetables with reference to the more unusual constituents, 10/27/32, L. W. Gaddum (Purnell) (State).

A study of the chemical properties of the glucosides of citrus fruits, 10/9/33, L. W. Gaddum (Purnell) (State).

A study of the pathologic changes in tissues and organs of animals affected by deficiency diseases or by toxic substances, 10/9/33, C. F. Ahmann (Purnell) (State).

An investigation of human dietary deficiency in Alachua County, Florida, with special reference to nutritional anemia in relation to the composition of home-grown foods, 4/16/34, O. D. Abbott, W. M. Neal [Animal Husbandry], and O. C. Bryan [Agronomy] (Purnell)

The development of quantitative spectrographic methods in agricultural research, 4/16/34, L. W. Gaddum and R. W. Williamson (Purnell) (State).

A study of the physical and chemical properties of eggs from hens fed rations containing different proteins, O. D. Abbott [Agr. Extension and Natl. Egg Laying Contest].

II.

Progress report in Florida Sta. Rpt. 1933, pp. 81-85.

The pectic constituents of citrus fruits, L. W. Gaddum. Florida Sta. Bul. 268 (1934), pp. 23.

The incidence and significance of the sickle cell trait, L. W. Diggs and C. F. Ahmann. Ann. Int. Med., 7 (1933), pp. 769-778.

The effect of diet on the worm burden of children infected with Necator americanus and Ascaris lumbricoides, C. F. Ahmann and L. M. Bristol. South. Med. Jour., 26 (1933), pp. 959-962.

The effect of improved diet on children with a moderate degree of hook-worm infection, O. D. Abbott. Jour. Home Econ., 26 (1934), pp. 577-580.

GEORGIA

I.

Utilization of fruits and vegetables and their by-products, revised 8/3/34, L. Ascham [Horticulture & Chemistry] (Purnell).

Studies in nutritional anemia, revised 10/9/34, The available iron in turnip greens, collards, mustard, and other greens used in the South, L. Ascham, M. Speirs, B. Ethridge and K. T. Holley [Chemistry] (Purnell).

Vitamin A and G content of frozen milk, 2/19/31, L. Ascham (Purnell).

The pimiento pepper in nutrition. (a) The vitamin A content of fresh, canned, and dried pimiento; (b-1) The vitamin A content of eggs laid by hens fed dried pimiento; (b-2) The culinary possibilities of "Pimiento" eggs; (c) The vitamin A content of milk from pimiento fed cows, revised 8/3/34, L. Ascham, M. Speirs, B. Ethridge, and K. T. Holley [Chemistry] (Purnell).

GEORGIA

II.

Progress report in Georgia Sta. Rpt. 1933-34, pp. 49, 50.

The vitamin A content of the pimiento pepper, L. Ascham. Georgia Sta. Bul. 177 (1933), pp. 8.

The utilization of pimiento pepper in the diet, L. Ascham. Georgia Sta. Bul. 179 (1933), pp. 16.

The cost of living for 57 industrial families and for 98 farm families in Georgia; E. S. Jones. Georgia Sta. Bul. 180 (1933), pp. 30.

HAWAII

I.

Vitamin determinations and chemical analyses of Hawaiian foods and feeds, 5/31/29, revised 8/30/33 (Vitamins A, B, C, and G in Hawaiian fruits). Organic nutrients and Ca, P, and Fe content of various Hawaiian fruits, C. D. Miller and R. C. Robbins (Hatch).

Chemical and biological studies of the proteins of the pigeon pea (*Cajanus indicus*), 5/27/30, C. D. Miller, R. C. Robbins, and K. Haida (Adams).

Chemical and biological studies of the Opihi (*Helcioniscus exeratus* and *H. argenteatus*), 5/26/31, C. D. Miller, C. J. Hamre [Zoology], and R. C. Robbins (Hatch).

A study of the transfer of vitamin B from rice bran to various types of plant tissues as the result of pickling them with salt and rice bran, Daikon, C. D. Miller, and K. Haida (Hatch).

Avocado: Study of the sterol content and vitamin value of the avocado oil, 5/27/30, L. N. Bilger (Adams).

A chemical study of some Hawaiian plants. (a) Poisonous plants, (b) Passion fruit, 7/27/34, L. N. Bilger, R. Nikaido, and R. Kojinie (Hatch).

The isolation of carotene from papaya and other Hawaiian fruits, 7/27/34, L. N. Bilger and E. Watanabe (Hatch).

II.

Progress report in Hawaii Sta. Rpt. 1933, pp. 23-26.

Japanese foods commonly used in Hawaii, C. D. Miller. Hawaii Sta. Bul. 68 (1933), pp. 43.

The nutritive value of the mountain apple *Eugenia malaccensis* or *Jambosa malaccensis*, C. D. Miller, R. C. Robbins, and K. Haida. Philippine Jour. Sci., 53 (1934), pp. 211-221.

The nutritive value of green immature soybeans, C. D. Miller and R. C. Robbins. Jour. Agr. Res. [U.S.], 49 (1934), pp. 161-167.

IDAHO

I.

The effect of storage upon the vitamin C content of the Russet Burbank potato of Idaho, 11/26/27, E. Woods (Purnell).

The vitamin G content of the Idaho Russet Burbank potato, 3/1/32, E. Woods (Purnell).

The vitamin A content of pasture plants under pasture conditions [Dairy Husbandry], 12/6/32, E. Woods (Purnell).

The vitamin C in fresh and canned Italian prunes, 10/18/34, E. Woods (Purnell).

IDAHO

II.

Progress report in Idaho Sta. Bul. 205 (1934), pp. 48, 49.

ILLINOIS

I.

The vitamin B and the vitamin G requirements for lactation, 10/26/29, C. R. Meyer, J. Smith, and I. Jacobs (Purnell).

The nutritive value of highly pigmented corns.--(a) A study of the possibility of maintaining a high vitamin A content of milk by the inclusion in rations of intensely pigmented corn, 10/27/33, J. Outhouse, C. R. Meyer, and J. Smith (Purnell).

The utilization of carotene by children, 5/17/34, J. Outhouse and C. R. Meyer (Purnell).

The factors that influence bone calcification.--I, The role of lactose in mineral metabolism, 2/2/32, J. Outhouse, C. R. Meyer, and J. Smith (Purnell).

A study of wheat flours milled in Illinois in relation to their use in baking, 1/3/27, S. Woodruff (Purnell).

Characteristics of starches of wheat and of other sources, 7/8/31, S. Woodruff (Purnell).

Home accounts for the family on the farm and in the small town, 4/7/28, P. Nickell and P. C. Freeman (Purnell).

Studies in the utilization of corn as human food.--I, Physico-chemical changes during cooking, especially the softening of the kernel, 8/23/33, S. Woodruff (Purnell).

Soybeans and soybean products as human food, S. Woodruff (Departmental).

Household care and cleaning, G. J. Ward and I. M. Hitchcock. Illinois Sta. Circ. 416 (1934), pp. 24. II.

Living expenditures of a group of Illinois farm families, 1930, 1931, 1932, R. C. Freeman. Illinois Sta. Bul. 406 (1934). pp. 367-406.

The biological activity of some carotene preparations, H. N. Holmes, R. Corbet, H. Cassidy, C. R. Meyer, and S. I. Jacobs. Jour. Nutrition, 7 (1934), pp. 321-329.

A photomicrographic study of gelatinized wheat starch, S. Woodruff and L. R. Tebber. Jour. Agr. Res. [U.S.], 46 (1933), pp. 1099-1108.

INDIANA

I.

A study of ovens used for domestic cooking purposes, 6/20/29, G. Redfield (Purnell).

A study of efficient kitchen arrangement, 5/23/30, G. Redfield (Purnell).

A study of the relation between color, composition, culinary qualities, and marketing value of Indiana potatoes grown on muck and other soil types. [Horticulture], 1/18/34, G. Redfield (Purnell) (State).

INDIANA

I. (cont.)

A study of the use of the oven, the waterless cooker, the water-bath, and the pressure cooker for processing fruits and vegetables in home canning, R. Jordan (State).

A study of hydrogenated lard (produced under known conditions) as a culinary fat, R. Jordan (State).

II.

Progress report in Indiana Sta. Rpt. 1933, pp. 35-37.

Electric equipment relieves household labor, G. M. Redfield, Purdue Agr., 27 (1933), pp. 80, 86.

Electric appliances, G. M. Redfield. Indiana Farmers' Guide, 90 (1934), p. 10.

Kerosene cook stoves for rural homes, G. M. Redfield, Agr. Leaders' Digest, 15 (1934), p. 40.

Electric washer saves labor, G. M. Redfield. Indiana Farmers' Guide, 90 (1934), p. 16.

Electric equipment in the farm home, G. M. Redfield. (Mimeographed Pub.) (1934), pp. 18.

Report of research projects relating to the home, G. M. Redfield. (Mimeographed Pub.) (1934), pp. 19.

Successful candy-making depends on simple rule, G. M. Redfield, Purdue Agr., 28 (1933), p. 21.

Effect of lactose on rickets in rats, G. Sunderlin. Amer. Jour. Diseases Children, 36 (1933), pp. 786-793.

The calcium retention on a diet containing leaf lettuce, M. G. Mallon, L. M. Johnson, and C. R. Darby. Jour. Nutrition, 6 (1933), pp. 303-311.

The effect of milk on the whipping qualities of egg white, G. Sunderlin and V. Dizmang. Egg and Poultry Jour., 39 (1933), pp. 18, 19.

Use of honey in preserving fruits, R. Jordan. Indiana Farmers' Guide, 90 (1934), p. 308.

Honey in the home, R. Jordan. Agr. Leaders' Digest, 15 (1934), p. 53.

Honey in custom and tradition, R. Jordan. Home Econ. News, 12 (1934), p. 236.

IOWA

I.

Growth, reproduction, lactation, longevity, and hemoglobin formation in albino rats on meat diets contrasted with their response on the Steenbock stock diet and on the Sherman milk diet, 10/24/31, P. M. Nelson, and P. Swanson, assisted by M. Gunson and L. M. Heuerman. (Purnell) (State).

A study of the conditions influencing the production of uniform experimental animals in the stock colony, 10/24/31, P. M. Nelson and P. Swanson, assisted by G. Timson (Purnell) (State).

The influence of experimental technic during the preliminary depletion period in vitamin A determinations on the response of the test animals to supplementary feeding of the vitamin, 10/24/31, P. M. Nelson and P. Swanson, assisted by G. Timson (Purnell) (State).

IOWA

I. (Cont.)

The association of vitamin A with plant pigments, 10/24/31, P. Swanson and E. S. Haber, [Vegetable Crops] (Purnell) (State) (Misc.).

The deterioration of weighted silks under the conditions to which fabrics are subjected in service of maintenance, 10/28/32, revised 8/16/34, The deterioration of weighted silks by oxidizing solutions and by salt solutions, R. Edgar [Chemistry] and J. Ross (Purnell) (State).

A study of the application of heat to cooking utensils of different materials, 10/14/33, L. J. Peet and L. Sater, and F. E. Johnson [Electrical Engineering], B. Lowe, and J. W. Woodrow [Physics] advisors (Purnell) (State).

The analysis and interpretation of housing data secured in representative farm and rural communities in Iowa [Agr. Econ., Agr. Engineering, and Agr. Extension Service], M. Reid and H. Giese (Purnell).

The relationships of the physical and chemical characteristics and constants of lard to its culinary value, P. M. Nelson and B. Lowe (State).

The effect of hydrogenated lard, storage lard, and heated lard on the destruction of vitamin A in foods, P. M. Nelson and B. Lowe (cooperating with Chemistry) (State).

The influence of the feeding of certain fats upon the quality and palatability of beef, M. D. Helser, F. J. Beard, and C. C. Culbertson [Animal Husbandry], and P. M. Nelson and B. Lowe cooperating (Purnell).

The household refrigeration of meat, L. J. Peet (National Live Stock and Meat Board).

Electric cleaners.--I, Effect on dirt removal of nozzle height, speed of cleaning, and length of cleaning. II. A comparison of the ratio of nap removal to dirt removal in eight electric cleaners, L. J. Peet, L. Sater, and E. Beveridge (State).

Relative performance of standard sheet and cast aluminum as materials for pans used in surface and oven cookery on gas and electric ranges, L. J. Peet and K. Steele (State).

II.

Progress report in Iowa Sta. Rpt. 1933, pp. 116-122.

A comparative analysis of three hundred fabrics, R. Edgar. Iowa State Col. Jour. Sci., 8 (1933), pp. 17-73.

The alkaline hydrolysis of cellulose acetate rayon, M. W. Van Ess and R. Edgar. Iowa State Col. Jour. Sci., 8 (1934), pp. 397-408.

The effect of dry cleaning and mechanical cleaning upon furs, K. Cranor, V. Fisher, A. Sundt, L. Perrin, A. Meyer, and V. Clark. Iowa State Col. Jour. Sci., 8 (1934), pp. 427-447.

Tests to determine the desirability and extent to which raincoat fabrics are waterproof, R. Johnston and K. Cranor. Textile Colorist, 56 (1934), pp. 191, 192.

The relation of the quality of vegetables to the waste incurred and the time used in their preparation, P. M. Nelson and G. P. Crouch. Jour. Amer. Dietet. Assoc., 9 (1933), pp. 107-119.

Disturbance in the water metabolism of albino rats induced on feeding a ration poor in inorganic constituents, P. P. Swanson and A. H. Smith. Jour. Nutrition, 7 (1934), Proc., p. 9.

IOWA

II. (Cont.)

Plain cakes.--VI, The determination of the optimum quantity of three types of baking powder, B. B. McLean and B. Lowe. Abstract in Jour. Home Econ., 26 (1934), p. 523.

The creaming qualities of lard and other fats and new ways of mixing them in plain cakes, E. L. Martin and B. Lowe. Abstract in Jour. Home Econ., 26 (1934), p. 524.

KANSAS

I.

The vitamin content of foods relating to human nutrition.--Subproject 2, Determinations of the vitamin content of foods. Phase F, A study of the vitamin A content of the colostrum of the dairy cow, 1/26/34, M. Kramer, B. Kunerth, and W. H. Riddell [Dairy Husbandry] (Purnell).

The utilization of calcium and phosphorus from various forms of milk products, revised 1/26/34, Subproject 5, A study of the relation of the consumption of milk and milk products to the intake of protein, calcium, and phosphorus as indicated by output, M. M. Kramer and B. Kunerth (Purnell).

A study of factors affecting the service qualities of certain textile fabrics, revised 11/20/33, Subproject 1, Phase E, A comparative study of certain blanket materials, K. Hess. Subproject 3, The effect of heat, light, and perspiration on the service qualities of weighted and unweighted silk fabrics, E. Bruner. Subproject 4, A study of the service qualities of fabrics with regard to adequate labeling, K. Hess (Purnell).

Meat investigations, revised 2/21/34, Subproject 3, Influence of feed and management upon tenderness; Phase C, Cooking of roasts according to prescribed method with judging of tenderness by palatability committee and objectively by mechanical shear, M. M. Kramer and G. Vail. 4, Influence of feed and management upon keeping quality of beef; Phase C, Same as 3-C plus determinations of expressible juice, M. M. Kramer and G. Vail. 5, Relation of degree of finish to quality and palatability of beef; Phase C, Cooking of roasts and judging by palatability committee, M. M. Kramer and G. Vail. 6, Relation of juiciness to quality and palatability of beef; Phase B, Cooking of roasts with determinations of juiciness subjectively and objectively, M. M. Kramer and G. Vail. 8, A study of the relation of method of cooking to quality and palatability of meat, G. E. Vail. 10, A study of the composition and caloric value of cooked and raw meats, M. S. Pittman and M. M. Kramer. 11, Investigation of the utilization of meat by human subjects, M. S. Pittman. Cooperation with [Animal Husbandry and Chemistry] (Purnell).

A study of electric and other types of stoves commonly used in farm household cooking processes, 11/27/28, M. F. Taylor (Purnell).

The effect upon the animal body of varying the amount of vitamin in the diet.--Subproject 1, The effect upon the animal body of varying the amount of vitamin C in the diet with special reference to reproduction and the development of the embryo, 4/6/32, M. Kramer and M. T. Harman [Zoology] (Purnell).

KANSAS

II.

Growth and reproduction of rats on a vitamin C-free diet, A. K. Brill. Trans. Kansas Acad. Sci., 36 (1933), pp. 153-155.

A study of the effects of frying potato chips in different ways, I. Chitwood and G. Vail. Trans. Kansas Acad. Sci., 36 (1933), p. 156.

Comparison of total nitrogen analyses of urine for one- and four-day periods, B. L. Kunerth. Trans. Kansas Acad. Sci., 36 (1933), pp. 157, 158.

Relative economy of various types of cheese as determined by analysis R. B. McCammon and W. J. Caulfield. Trans. Kansas Acad. Sci., 36 (1933), pp. 159-161.

Disturbances of reproduction and ovarian changes in the guinea pig in relation to vitamin C deficiency, M. M. Kramer, M. T. Harman, and A. K. Brill. Amer. Jour. Physiol., 106 (1933), pp. 611-622.

Nutritive value of various types of cheese, R. B. McCammon and M. M. Kramer. Jour. Amer. Dietet. Assoc., 9 (1933), pp. 292-294.

A method for comparing the cost of fresh and canned vegetables used in institutions, M. M. Kramer and H. Fisher. Jour. Amer. Dietet. Assoc., 9 (1934), pp. 490-492.

Protein, calcium, and phosphorus intakes of college women as indicated by nitrogen, calcium, and phosphorus outputs, M. M. Kramer, H. F. Evers, M. G. Fletcher, and D. I. Gallemore. Jour. Nutrition, 7 (1934), pp. 89-96.

Qualities of percale obtained on the market compared with government specifications, E. Bruner and S. H. Roberts. Jour. Home Econ., 26 (1934), pp. 286, 287.

A comparison of methods for determining the absorption of water by fabrics, K. Hess and D. Readhimer. Jour. Home Econ., 26 (1934), pp. 298-303.

The odor and flavor of eggs, R. B. McCammon, M. S. Pittman, and L. A. Wilhelm. Poultry Sci., 13 (1934), pp. 95-101.

Durability of blankets affected by finish, tensile strength, and weight, K. Hess and D. Saville. Textile World, 84 (1934), p. 1058.

How to choose blankets, K. Hess. Christian Sci. Monitor, Aug. 10, 1934, p. 9c.

KENTUCKY

I.

The metabolism of obesity, 10/20/25, S. E. Erikson. (Purnell).

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The factors affecting the cooking quality of potatoes, revised 8/29/32, (2) The relation of internal composition and physical structure of the potato to mealiness, M. D. Sweetman (Purnell).

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[Nutritive value of cranberries, 7/6/26, C. R. Fellers, J. A. Clague, and P. D. Isham, Horticultural Manufacturers] (Purnell).

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MINNESOTA

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MISSOURI

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A study of gas stoves, 7/14/33, A. E. Baragar (Purnell).

Factors affecting the quality and palatability of meat.--A. Changing grass-fed beef to corn-fed beef. B. Effect of certain feeds upon the quality and palatability of pork, 7/9/25 and 11/20/31, [H. J. Gramlich, W. J. Loeffel, Animal Husbandry] and M. Peters (Purnell).

The use of lard in home baking.--I, The use of lard for cake making, 10/25/33, [H. J. Gramlich and W. J. Loeffel, Animal Husbandry] and R. Gibbons and M. Peters (Purnell) (State).

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NEW MEXICO

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Cost of living index for farm families, 7/9/25, H. Canon and M. Rollins (Purnell) (State).

A study of three types of variations in prices charged by retailers for grocery products, 8/9/34, D. Monroe and L. Doman (Purnell).

The quality of New York State fruits and vegetables--A, The comparative cooking quality of apples, 8/7/31, M. C. Pfund and E. Macloón [Pomology, New York State Station] (Furnell) (State).

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NORTH DAKOTA

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OKLAHOMA

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PENNSYLVANIA

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[Studies in feeding technique with special reference to methods used in vitamin research, R. A. Dutcher and N. B. Guerrant, Chemistry] (State).

[Effect of lead weighted silk on experimental animals, E. O. Weidner and P. B. Mack, School of Chemistry and Physics].

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RHODE ISLAND

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The methods by which the housekeeping activities are carried on in the home of the married woman who works full time outside the home, 5/16/34, M. Whittemore and B. M. Kuschke (Purnell).

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SOUTH CAROLINA

I.

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A study of the attitude of high school seniors toward farming and life on the farm, M. E. Frayser (State).

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SOUTH DAKOTA

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The influence of various kinds of wool on some of the physical properties of flannel, 1/30/34, J. Ross and E. Pierson (Purnell).

The vitaman B₁ and B₂ (G) content of South Carolina cross-bred lamb (muscle, liver, pancreas, thymus) and vitamin C content of lamb liver, 9/21/33, M. Kellogg and E. Pierson (Purnell).

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TENNESSEE

I.

Vitamin G content of vegetables grown in Tennessee, leaf lettuce, peas, cabbage, and sweetpotatoes, 7/11/32, F. L. MacLeod (Purnell).

[Sweetpotato vinegar--An investigation of methods with special regard to home production, 10/25/29, G. A. Shuey, Chemistry] (Purnell).

[Sweetpotatoe sirup--An investigation of possibilities of home production, 7/30/30, G. A. Shuey, Chemistry] (Purnell).

[Factors affecting the quality of strawberry juice, 7/25/34, G. A. Shuey, Chemistry] (Purnell).

Nutritive value of (a) dicalcium phosphate, (b) dicalcium and magnesium phosphate, F. L. MacLeod and E. Utley (Departmental and T.V.A.).

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TEXAS

I.

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TEXAS

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UTAH

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